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NEW YORK, NY 10023			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)				
	10/812,743	SHAPIRO, ARIEL				
Office Action Summary	Examiner	Art Unit				
	Steven Leff	1761				
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address				
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period way a failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION B6(a). In no event, however, may a reply be tim rill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 04 Ju	ne 2007.					
2a)⊠ This action is FINAL . 2b)☐ This	This action is FINAL . 2b) This action is non-final.					
3) Since this application is in condition for allowar	☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4) ⊠ Claim(s) 1-29 is/are pending in the application. 4a) Of the above claim(s) is/are withdraw 5) □ Claim(s) is/are allowed. 6) ⊠ Claim(s) 1-29 is/are rejected. 7) □ Claim(s) is/are objected to. 8) □ Claim(s) are subject to restriction and/or						
Application Papers		•				
9) The specification is objected to by the Examine 10) The drawing(s) filed on 17 July 2003 is/are: a) Applicant may not request that any objection to the Replacement drawing sheet(s) including the correction 11) The oath or declaration is objected to by the Ex	☑ accepted or b) ☐ objected to be drawing(s) be held in abeyance. See ion is required if the drawing(s) is object.	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).				
Priority under 35 U.S.C. § 119	•					
12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☒ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 4/27/07.	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ate				

Application/Control Number: 10/812,743

Art Unit: 1761

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- Claims 1, 3, 5, 7, 8, 11, 12, 17, 19, 20, 23-25, 27 and 28 remain rejected under 35 U.S.C. 102(b) as being anticipated by Esty (Re 28892).

With respect to claims 1, 3, 5, 7, 8, 11, 12, 17, 19, 20, 23-25, 27 and 28, Esty teaches a package for preserving perishable products, such as "fruits, vegetable, etc." (col. 2 line 4+) Specifically with respect to claims 1, 11, 17, 25, and 27 Esty teaches a communication aperture in the wall of a container, (col. 2 line 8+) that contains a "flexible impermeable bag" (col. 2 line 1+), which is viewed as a controlled permeability bag, that contains perishable products. Plastic tubes, which are hermetically connected to the impermeable flexible bag, (col. 1 line 30+) are aligned, and supported, by the walls of the container and the outlet openings in the wall of the container. (col. 2 line 9+) The plastic tube is connected to a hose for providing atmosphere treatment within the bag, (col. 2 line 42+) where sealing of the container after the atmospheric treatment is affected "by cutting of the plastic tube(s) with hot scissors." (col. 2 line 67+)

Regarding claims 8, 11, 12, 24, 27, and 28 Esty teaches a sealing layer on the outside of the carton which is attached to the wall of the container. Esty further teaches "aperturing" the bag and sealing layer in a single operation. Regarding the word "attaching" in claim 11, 12, 27, and 28, and the word "attached" in claims 8 and 24, the specification does not clearly define (on page 8 lines 1+) what is meant to represent the word attached and further states "any equivalent adherence of the bag to the carton in the region of aperture 16." In the instant situation reference is given to a common dictionary meaning for the word "attached" or "attaching", where the definition reads "to fasten, secure, or join" (Dictionary.com). Thus regarding claims 8, 11, 12, 24, 27, and 28, Esty

teaches a tube or tubes which are hermetically sealed to the flexible bag where the tube or tubes extend from the bag and are "alignable with and extend through the inlet and outlet openings, and are supported by the walls forming the openings of the container." (col. 2) line 8+) The tube may be sealed, after treatment of interior of the bag by cutting the end of the tube with a hot scissor thus melting the open ends together. Regarding specifically claims 8, 11, 12, 24 and 27-28, it is the Office's view that the "sealing layer" is the seal created by cutting the end of the tube with the hot scissors thus fusing the ends together. Although this step is taught by Esty after treating the produce a first time, it is the Office's view that treatment may take place through the same tube multiple times by simply cutting the tube with non-heated scissors or by inserting a sharpened tool directly through the seal thus creating an opening, followed by re-cutting the tube with hot scissors thus re-producing a seal. Therefore, it is interpreted that with respect to the sealing layer being adhered to the wall of the container that Esty positively teaches this limitation when taking the word "attach" for its' literal and broadest reasonable dictionary definition. In the instant case, Esty teaches that the wall of the container comprises openings which are formed to "support" or attach the tube(s) to the container wall of the carton as the tubes extend there through, in order to provide enough support that the tubes are grasped by the walls of the container ensuring that the tube(s) maintain extended though the openings until physically removed. The tubes have been cut at their ends to form a sealing layer. The sealing layer may then be broken by cutting the tube with non-heated scissors or by inserting a sharpened tool directly through the seal thus creating an aperture in the sealing layer as recited in claims 8, 11, 12, 24 and 27-28.

With regards to claims 4, and 20, Esty teaches purging the container for a time sufficient to purge essentially all of the oxygen from the container, (col. 3 line 9+) and substituting an inert gas (col. 2 line 41+) within the treatment atmosphere.

With respect to claims 3, 7, 19, and 23, although Esty does not specifically recite the word "fumigation", Esty does teach that the lack of oxygen will cause any animal life included in the container to quickly suffocate and the produce will be protected from insect damage." (col. 3 line 14+) Esty further teaches the use of Nitrogen gas for its art recognized and applicants intended function of purging the bag of oxygen, thus eliminating insects within the bag containing the produce. In support of this position, an article by Stuart M. Bennett, on the website http://www.the-piedpiper.co.uk/th7.htm

recites "fumigation is the use of a gas (not the spraying of insecticides) to destroy pests which may infest a building or a product," where "virtually anything can be fumigated." (pg. 1 col. 3) Bennett continues by teaching that various gases may be used to fumigate a product or environment, and specifically names Nitrogen. (pg. 2) It is noted that MPEP 2144.04 states that "In considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." (Thus the article by Bennett is not cited to modify the first reference but to merely provide support for the inherent teachings of Esty.) Therefore, Esty inherently teaches all of the limitations of claims 3, 7, 19, and 23, absent any clear and convincing evidence and/or arguments to the contrary.

With respect to claim 12, which recites the limitation "aperturing said bag and said sealing layer in a single operation," it is the office's view that when applying the cited dictionary definition for "attach", that Esty attaches the bag to the container, adjacent the aperture in the container wall, and further apertures the bag and sealing layer in a single operation. Due to the fact that the tube is hermetically sealed to the bag, the bag is interpreted to be the bag and tube in combination where the tube has been cut by a hot scissor to form a seal. Therefore, a sealing layer is located at the end of the tube(s), where the sealing layer is supported or grasped by the container walls and when an aperture is formed in the sealing layer of the tube an aperture is consequently formed in the bag as well in a single operation.

Therefore regarding claims 1, 3, 5, 7, 8, 11, 12, 17, 19, 20, 23-25, 27 and 28 Esty teaches all of the limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- Claims 2, 5, 6, 18, 21, and 22, remain rejected under 35 U.S.C. 103(a) as being unpatentable over Esty. (Re28892)

Esty is taken as above

With respect to claims 2, and 18 although Esty does not teach that the atmosphere treatment comprises vacuum cooling, Esty does teach that the gas treatment could be performed by evacuating the air by applying a vacuum. Esty continues by reciting that the tube can be connected to a hose, which is connected to a supply of inert gas. (col. 2 line 41+) In the instance where the tube is connected to a source which may supply cool air, Esty would thus be able to apply vacuum cooling to the container. Therefore one of ordinary skill in the art would have been motivated to change the source of the atmosphere treatment used to supply the inert gas to the package, with a source that supplies cool air instead thus allowing the contents of the treatment package to undergo different treatments, within the same bag, by simply changing the supply source. Further, it would have been obvious to one of ordinary skill in the art to change the supply source from a first treatment atmosphere to a second atmosphere thus not only allowing the contents of a package to be treated different ways, but would also allow the use of the container for treating different contents with different atmospheres depending upon the different characteristics of the given food type. In addition, the claimed method of packaging agricultural produce, differs from Esty only in that the atmosphere treatment applied in Esty uses inert gasses where the atmosphere treatment of the claims is drawn to a cool atmosphere. Claims 2, and 18 would have further been obvious over the prior art package in view of Esty, since the package is being used for performing the same

function of treating a food product within a certain atmosphere, albeit in a different environment. (see MPEP 2144.07)

Therefore regarding claims 2, 5, 6, 18, 21, and 22 it would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have produced a food package that was capable of accepting different treatment atmosphere.

• Claims 8, 11-12, 16, 24, and 27, remain rejected under 35 U.S.C. 103(a) as being unpatentable over Esty (re28892) in view of Cabernoch et al. (4706827)

Esty is taken as above.

With respect to claims 8, 11-12, 16, 24, and 27, Cabernoch et al. teach a container arrangement, which employs a rigid outer sleeve closed at one end, and a flexible inner bag, where the inner bag is pre-filled and the container is hermetically sealed to isolate the contents from the environment, and further to maintain the contents in aseptic or sterile condition (col. 2 line 26+) thus allowing for storing and shipping of the containers. (col. 2 line 47+) Specifically, with respect to claims 8, 11-12, 16, 24, and 27, Cabernoch et al. teach a container which includes a flexible pouch that includes baby formula. (col. 3 line 67+) The pouch is "securely mounted within the sleeve by a rigid plastic disc disposed between the pouch and a nipple assembly." (col. 4 line 17+) "The flexible container can also be attached to the underside of the disc by an adhesive, in which case, a wider variety of materials may be used. The disk 30 has a generally thin center portion which defines the nipple access site and a relatively thick annular rim portion 32 which is rigidly secured to the shell, such as by heat or solvent bonding, adhesive or mechanical interlock. The center portion of the circular disk interior of the rim is substantially thinner than the rim for penetration by the nipple access member 26." (col. 4 line 24+)

To access the contents of the pouch a cap is removed and the nipple is moved from a retracted position to an accessing position for piercing the disc and as well as the wall of the pouch in order to permit dispensing of the contents. (col. 4 line 61+)

With respect to claims 8, 11-12, 16, 24, and 27, Esty teaches attaching the sealing layer to the container wall, and where Cabernoch et al. does teach the general principal of adhesively securing the disk (or sealing layer) to the container wall, and further teach adhering the bag or pouch within the container to the underside of the disc for its art

recognized and applicants intended function of creating a seal between the outer container and the pouch to allow the pouch contents to be maintained in a non-perishable manner until so accessed, where the sealing layer and bag are penetrated in a single operation.

Although the container of Esty and Cabernoch et al. are utilized for different products, Cabernock et al. provides a known means for sealing a container to prevent spoiling and further teaches a known means for opening the container. Therefore one of ordinary skill in the art would have been motivated to combine the teachings of Esty and Cabernoch et al. in order to produce a container which seals the contents thereof in an environment which does not promote spoiling of the contents in order to increase the shelf life of the contents. In addition, one would have been motivated to combine the teachings of Esty and Cabernoch et al. to ensure that the contents are accessible from the outside of the carton thus avoiding the need to open the carton to access the contents. It would be advantageous to access the contents from the outside of the carton in order to seal the interior of the bag from the outside atmosphere thereby maintaining a specific atmosphere within the container and thus further decreasing the possibility of the contents to spoil or lose nutrients. Further, claims 8, 11-12, 16, 24, and 27 are obvious over the prior art of Esty since the container is being used perform the same function of storing a perishable food product within a certain atmosphere in order to keep the product from spoiling or deteriorating in nutritional value albeit that the containers of Esty and Cabernoch et al. contain different products.

With regards to claim 16, although Esty does not teach using a cap to cover the communication hole in the wall of the container, Cabernock et al. does teach using a "plastic cover", (col. 5 line 26+) which is used to cover the dispensing end. In regards to the sealing method of Esty, one would be required to have hot scissors at all time in order to guarantee sealing. However the use of a cap would allow a sealing method to be readily available without the need of an additional step of heating of the scissors in order to obtain the seal. Further, depending upon the type of plastic tube that is used in Esty, the scissors may be required to be of a specific strength, or heat in order to cut through the plastic pipe where the plastic pipe is rigid. Therefore one of ordinary skill in the art would have been motivated to combine the teachings of Esty and Cabernoch et al. in

order to provide a sealing method which did not require the use of hot scissors, thus providing a more readily available sealing method.

Therefore regarding claims 8, 11-12, 16, 24, and 27, it would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have made a container where the sealing layer is adhered to the wall of the container, and where the bag and the sealing layer are penetrated in a single operation thus forming communication apertures.

• Claims 9, 10, 13-15, 26, and 28, and 29 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Esty (re28892) in view of Wu et al. (5575418)

Esty is taken as above

With respect to claims 9, 10, 13-15, 26, and 28, and 29, Wu et al. teach "package systems for refrigerated modified atmosphere packaging of fresh fruit, vegetables and cut flowers. More particularly, this invention relates to the design, construction, closure, sealing and use of gas-permeable corrugated paperboard package systems for prolonging the storage life of fresh fruits, vegetables and cut flowers under modified atmosphere in the headspaces of the closed package system." (abstract) The package may possess holes or ports in the end panels (col. 7 line 7+), which would allow for "vacuum cooling" and/or blowing in a specific gas mixture. "Thereafter, the ports 16 are covered with high gas barrier tape 20 (see FIG. 3c which illustrates an isometric view of a MAP container with folded ends, ports and a tape over the ports), or filled with high gas barrier or gaspermeable styrofoam plugs 22 (see FIG. 3b, which 3b illustrates an end section view of a MAP container wall with a plug through the port), or plugs with vent pinholes for increased influx/efflux of MA gases. The MAP containers may also be vacuum cooled, i.e. placed in a vacuum cooled enclosed room." (col. 7 line 14+)

With respect to the paperboard package, Wu et al. teach that the paperboard package is made up of layers where one of the layers is "a layer of polymer having a gas permeability which permits gas to be transmitted in either direction through the polymer at prescribed levels." (col. 3 line 36+) "The layer of polymer can be flexible and can have selected gas and moisture permeability," (col. 4 line 13+) where the "composition of gases is selected to suit individual fresh fruit and vegetable products and their respective levels of respiration." (col. 12 line 61+)

With respect specifically to claims 9, 10, 14, 15, and 26, although Esty does not teach that the flexible bag has permeability characteristics which are adapted to a given produce, Wu al. does teach the choice of permeability of the bag in respect to the produce which is contained within for the purpose of prolonging the storage life of fresh fruits, vegetables and cut flowers under modified atmosphere. Therefore, one of ordinary skill in the art would have been motivated to combine the teachings of Esty and Wu et al. in order to provide a package which not only contained the produce in an impermeable bag with a modified atmosphere but also allowed the flow of specific gases to be transmitted into or out of the package thus increasing the shelf life of the produce within, over a package which was only impermeable.

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With regards to claims 13 and 29, although Esty does not teach using an adhesive sticker to cover the communication hole in the wall of the container, Wu et al. does teach using "high gas barrier tape." (col. 7 line 14+) In regards to the sealing method of Esty, one would be required to have hot scissors at all time in order to guarantee sealing. However the use of an adhesive sticker would allow a sealing method to be readily available without the need of an additional step of heating of the scissors in order to obtain the seal. Further, depending upon the type of plastic tube that is used in Esty, the scissors may be required to be of a specific strength, or heat in order to cut through the plastic pipe where the plastic pipe is rigid. Therefore one of ordinary skill in the art would have been motivated to combine the teachings of Esty and Wu et al. in order to provide a sealing method which did not require the use of hot scissors, thus providing a more readily available sealing method.

Therefore with respect to claims 9, 10, 13-15, 26, 28, and 29 it would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have produced a package which increased the shelf life of produce by selectively allowing certain gases to pass there through.

Response to Arguments

Applicant's arguments filed June 4th, 2007 have been fully considered but they are not persuasive. With respect to applicant's argument that Esty fails to teach all of the limitations of claim 1 and specifically with regard to the "controlled permeability bag", applicant states that the specification teaches a specific definition on page 1, line 16-19 with regard to the limitation.

Specifically, applicant states on page 9, paragraph 4 that the "Modified atmosphere condition" within the controlled permeability bag "is established by controlling the amounts and relationships of the appropriate gas components, which are required for extending the storage and shelf life of the agricultural product." However it is noted that this definition does not exclude an impermeable bag, where applicant specifically teaches on lines 23+ of page 8 and continued on page 9 that the interior of the bags within the cartons are all in fluid communication with the interior of the treatment chamber in such a way that the contents of the bags within the cartons are exposed to the environment of the interior of the treatment chamber, where the sealing of the bag with an impermeable gas layer "seals the interior of the bag from the outside atmosphere, thereby enabling maintenance of a modified atmosphere within the bag," where Esty specifically teaches purging a first gas and injecting a second gas, where due to the impermeability of the bag Esty attains a specific environment within the bag and therefore specifically teaches controlling the amounts and relationships of the appropriate gas components which are required for extending the storage and shelf life of the agricultural product" by producing a "modified atmosphere condition" within the bag as is required by claim 1.

It is further noted that claim 1 recites "a controlled permeability bag" however claim 1 does not limit what the "controlled permeability" is with respect to, and in light of the teaching of the specification and given its broadest reasonable interpretation, "controlled permeability" is with respect to gas, water vapor or liquid in general, where as stated in the previous Office action, an impermeable bag is defined as controlled permeability as the bag controls what is transferred there through for its art recognized and applicant's intended purpose of sealing a specific gas within the bag or for precluding a specific gas or liquid from entering the bag atmosphere and more specifically for the purpose of extending the storage and shelf life of the agricultural product as is taught by Esty.

With respect to applicant's arguments that the combination of Esty, and Cabernoch et al. does not show or suggest a controlled permeability bag, it is noted that Esty does teach a controlled permeability bag for the reasons as explained above, where the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

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With respect to applicant's arguments that the combination of Esty, and Wu et al. does not show or suggest a controlled permeability bag, it is noted that both Esty and Cabernoch et al. dos teach a controlled permeability bag for the reasons as explained above, and cited in the previous Office action, where the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Leff whose telephone number is (571) 272-6527. The examiner can normally be reached on Mon-Fri 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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DREW BECKER
PRIMARY EXAMINED

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8-13-07